INTERNATIONAL TELECOMMUNICATION UNION

Radiocommunication Bureau
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Administrative Circular
CA/48

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To Administrations of Member States of the ITU and Radiocommunication Sector Members

Subject: Results of the first Conference Preparatory Meeting (CPM99-1) for the WRC-99

Introduction

The World Radiocommunication Conference (Geneva, 1997) recommended to the Council an agenda for the World Radiocommunication Conference 1999 (WRC-99) attached as Annex 1 and a preliminary agenda for the World Radiocommunication Conference 2001 (WRC-01) attached as Annex 2.

The 1997 Radiocommunication Assembly by its Resolution ITU-R 2-2 (attached as Annex 3) established a Conference Preparatory Meeting (CPM) process. The WRC-97 decided that preparatory studies for the WRC-99 are to be carried out by this process. The CPM, for each conference, will normally hold two meetings during the interval between WRCs.

Results of the first Conference Preparatory meeting

The first Conference Preparatory Meeting was held in Geneva from 26 to 27November 1997. It organized conference preparatory studies for WRC-99 and WRC-01 and proposed a structure for the Report to the WRC-99 and WRC-01. The second meeting of the CPM will be held in Geneva from 12 to 23 April 1999.

The results are contained in the following Annexes:

Annex 4 Report on the first Conference Preparatory Meeting for WRC-99

Annex 5 Chapter structure and working procedures

Annex 6 Draft CPM Report to the WRC-99

Annex 7 CPM preparation for the WRC-99 in accordance with Resolution **721 (WRC-97)** (GTPLEN1-3)

Annex 8 Draft CPM-01 Report outline

Annex 9 CPM preparation for the WRC-01 in accordance with Resolution **722 (WRC-97)** (GTPLEN1-4)

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Furthermore, the CPM appointed a Rapporteur for each chapter to assist the Chairman in managing the development and flow of contributions towards a draft Report. The list of the CPM Chairman and Vice-Chairmen and of the Chapter Rapporteurs may be found in Annex 10. To facilitate this activity, ITU FTP "exchange areas"and associated E-mail mailing lists are currently being created for each chapter.

It was agreed that the second meeting in 1999, would prepare the CPM Report to the World Radiocommunication Conference, 1999, in accordance with the outline agreed by this meeting.

Inputs from the responsible Groups will be completed, no later than 9 November 1998.

In order to consolidate the inputs to the draft Report, a meeting of Study Group Chairman, responsible Group Chairmen, CPM Chapter Rapporteurs and CPM Chairman and Vice-Chairmen will be held in mid-November 1998.

Robert W. Jones
Director
Radiocommunication Bureau

Annexes: 10

Distribution

- Administrations of Member States of the ITU
- Radiocommunication Sector Members
- Chairmen and Vice-Chairmen of Radiocommunication Study Groups and the Special Committee on Regulatory/Procedural Matters
- Chairman and Vice-Chairmen of Radicommuncation Advisory Group
- Chairman and Vice-Chairmen of the Conference Preparatory Meeting
- Members of the Radio Regulations Board
- Secretary-General of the ITU, Director of the Telecommunication Standardization Bureau, Director of the Telecommunication Developement Bureau

ANNEX 1

RESOLUTION 721 (WRC-97) (GTPLEN1-3)

AGENDA FOR THE 1999 WORLD RADIOCOMMUNICATION CONFERENCE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that in accordance with Nos. 118 and 126 of the Convention of the International Telecommunication Union (Geneva, 1992), the general scope of the agenda for a world radiocommunication conference should be established four years in advance and a final agenda shall be established two years before the conference;

b) Article **13** of the Constitution of the International Telecommunication Union (Geneva, 1992) regarding the competence and scheduling of world radiocommunication conferences and Article **7** of the Convention (Geneva, 1992) regarding their agendas;

c) the relevant Resolutions and Recommendations of previous world administrative radio conferences (WARC) and world radiocommunication conferences (WRC),

recognizing

a) that this Conference has identified a number of urgent issues requiring further examination by the 1999 World Radiocommunication Conference (WRC-99);

b) that in preparing this agenda, many proposals from administrations could not be included and have had to be deferred to future conference agendas,

resolves

to recommend to the Council that a world radiocommunication conference be held in late 1999[1] for a period of four weeks, with the following agenda:

1 on the basis of proposals from administrations and the Report of the Conference Preparatory Meeting, taking account of the results of WRC-97, and with due regard to the requirements of existing and future services in the bands under consideration, to consider and take appropriate action in respect of the following topics:

1.1 requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, in accordance with Resolution **26 (Rev.WRC-97)**;

1.2 to finalize remaining issues in the review of Appendix **S3** to the Radio Regulations with respect to spurious emissions for space services, taking into account Recommendation **66 (Rev.WRC-97)** and the decisions of WRC-97 on adoption of new values, due to take effect at a future time, of spurious emissions for space services;

1.3 to consider the results of ITU-R studies in respect of Appendix **S7/28** on the method for the determination of the coordination area around an earth station in frequency bands shared among space services and terrestrial radiocommunication services, and take the appropriate decisions to revise this Appendix;

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[1] See Resolution **50 (WRC-97)** (GTPLEN1-2).

1.4 to consider issues concerning allocations and regulatory aspects related to Resolutions **126 (WRC-97)** (COM5-11)**, 726 (WRC-97)** (COM5-12), **128 (WRC-97)** (COM5-16)**, 129 (WRC-97)** (COM5-17), **133 (WRC-97)** (COM5-28) and **134 (WRC-97)** (COM5-29);

1.5 to consider regulatory provisions and possible additional frequency allocations for services using high altitude platform stations, taking into account the results of ITU-R studies conducted in response to Resolution **122 (WRC-97)** (COM5-7);

1.6 issues related to IMT-2000;

1.6.1 review of spectrum and regulatory issues for advanced mobile applications in the context of IMT-2000, noting that there is an urgent need to provide more spectrum for the terrestrial component of such applications and that priority should be given to terrestrial mobile spectrum needs, and adjustments to the Table of Frequency Allocations as necessary;

1.6.2 identification of a global radio control channel to facilitate multimode terminal operation and worldwide roaming of IMT-2000;

1.7 review the use of the HF bands by the aeronautical mobile (R) and maritime mobile services with a view to protecting the operational, distress and safety communications, taking into account Resolution **346 (WRC-97)** (COM4-9);

1.8 to consider regulatory and technical provisions to enable earth stations located on board vessels to operate in the fixed-satellite service networks in the bands 3700 - 4 200 MHz and 5 925 - 6 425 MHz, including their coordination with other services allocated in these bands;

1.9 take into account the results of ITU-R studies in evaluating the feasibility of an allocation in the space-to-Earth direction to the mobile-satellite service in a portion of the 1 559 - 1 567 MHz frequency range, in response to Resolutions **213** and **220 (WRC-97)** (COM5-31);

1.10 to consider results of ITU-R studies carried out in accordance with Resolution **218** (**WRC-97)** (COM5-24) and take appropriate action on this subject;

1.11 to consider constraints on existing allocations and to consider additional allocations on a worldwide basis for the non-GSO/MSS below 1 GHz , taking into account the results of ITU-R studies conducted in response to Resolutions No. **214 (Rev.WRC-97)** and **219 (WRC-97)** (COM5-25);

1.12 to consider the progress of studies on sharing between feeder links of non-geostationary satellite networks in the mobile-satellite service and geostationary-satellite networks in the fixed-satellite service in the bands 19.3 - 19.7 GHz and 29.1 - 29.5 GHz, taking into account Resolution No. **121 (Rev. WRC-97)**;

1.13 on the basis of the results of the studies in accordance with Resolutions **130 (WRC-97)** (COM5-18), **538 (WRC-97)** (COM5-19) and **131 (WRC-97)** (COM5-23):

1.13.1 review and, if appropriate, revise the power limits appearing in Articles **S21** and **S22** in relation to the sharing conditions among non-GSO FSS, GSO FSS, GSO BSS, space sciences and terrestrial services, to ensure the feasibility of these power limits and that these limits do not impose undue constraints on the development of these systems and services;

1.13.2 consider the inclusion in other frequency bands of similar limits in Articles **S21** and **S22**, or other regulatory approaches to be applied in relation to sharing situations;

1.14 review the results of the studies on the feasibility of implementing non-GSO MSS feeder links in the 15.43 - 15.63 GHz in accordance with Resolution **123 (WRC-97)** (COM5-8);

1.15 issues related to the radionavigation-satellite service:

1.15.1 to consider new allocations to the radionavigation-satellite service in the range from 1 to 6 GHz required to support developments;

1.15.2 to consider the addition of the space-to-space direction to the radionavigation-satellite service allocations in the bands 1 215 - 1 260 MHz and 1 559 - 1 610 MHz;

1.15.3 to consider the status of allocations to services other than the radionavigation-satellite (**S5.355** and **S5.359**) in the band 1 559 - 1 610 MHz;

1.16 to consider allocation of frequency bands above 71GHz to the earth exploration-satellite (passive) and radio astronomy services, taking into account Resolution **723 (WRC-97)** (COM5-1);

1.17 to consider possible worldwide allocation for the earth exploration-satellite (passive) and space research (passive) services in the band 18.6- 18.8 GHz, taking into account the results of the ITU-R studies;

1.18 consider the use of new digital technology for the maritime mobile service in the band 156 - 174 MHz and consequential revision of Appendix **S18/18**, taking into account Resolution **342 (WRC-97)** (COM4-3);

1.19 to consider the report of the IRG submitted by the Director of the Radiocommunication Bureau and determine whether it is possible to undertake replanning in accordance with Resolution **532 (WRC-97)** (COM4-22) for completion by a subsequent competent conference;

1.20 to consider the issues related to the application of Nos. **S9.8**, **S9.9** and **S9.17** and the corresponding parts of Appendix **S5** with respect to Appendices **S30** and **S30A**, with a view to possible deletion of Articles 6 and 7 of Appendices **S30** and **S30A**, also taking into consideration Recommendation **35 (WRC-95)**;

1.21 consider the report from the Radiocommunication Bureau on results of the analysis in accordance with Resolution **53 (WRC-97)** (COM4-20) and take appropriate actions;

2 to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations which have been communicated by the 1999 Radiocommunication Assembly, in accordance with Resolution **28 (WRC-95)**; and decide whether or not to update the corresponding references in the Radio Regulations, in accordance with principles contained in the Annex to Resolution **27 (Rev.WRC-97)**;

3 to consider such consequential changes and amendments to the Radio Regulations as may be necessitated by the decisions of the Conference;

4 in accordance with Resolution **95 (WRC-97)** (GTPLEN1-1), to review the Resolutions and Recommendations of previous conferences with a view to their possible revision, replacement or abrogation;

5 to review, and take appropriate action on, the report from the Radiocommunication Assembly submitted in accordance with Nos. 135 and 136 of the Convention (Geneva, 1992);

6 to identify those items requiring urgent actions by the radiocommunication study groups in preparation for the 2001 World Radiocommunication Conference (WRG01);

7 in accordance with Article 7 of the Convention (Geneva, 1992):

7.1 to consider and approve the report of the Director of the Radiocommunication Bureau on the activities of the Radiocommunication Sector since WRC-97;

7.2 to recommend to the Council items for inclusion in the agenda for WRG01, and to give its views on the preliminary agenda for the 2003 Conference and on possible agenda items for future conferences,

further resolves

8 to recommend to the Council that extra budgetary and conference resources be provided so that the following items can be included in this agenda for WRC-99:

8.1 to consider the regulatory and technical provisions for the quasi-geostationary satellite networks;

8.2 to examine the spectrum requirements for telemetry, tracking, and telecommand of fixed-satellite service networks operating with service links in the frequency bands above 17 GHz;

8.3 to review the use of the frequency band 415 - 526.5 kHz by the aeronautical radionavigation and maritime mobile services;

8.4 to review the use of the HF bands by the aeronautical mobile (R) and maritime mobile services with a view to meeting the changing needs of these services;

8.5 to consider possible extension of the allocation to the mobile-satellite service (Earth-to-space) on a secondary basis in the band 14.0 - 14.5 GHz to cover aeronautical applications as stipulated in Resolution **216 (WRC-97)** (COM5-2);

8.6 to consider the provision of up to 3 MHz of frequency spectrum for the implementation of telecommand links in the space research and space operation services in the frequency range between 100 MHz and 1 GHz, taking into account Resolution **723 (WRC-97)** (COM5-1);

8.7 to consider provision of up to 6 MHz of frequency spectrum to the earth exploration-satellite service (active) in the frequency band 420 - 470 MHz, in accordance with Resolution **727** (**WRC-97)** (COM5-13);

8.8 consideration of changes to the allocations in Region 3 for the band 1 350 - 1 400 MHz to permit co-primary use by the fixed service;

invites the Council

to finalize the agenda and arrange for the convening of WRG99 and to initiate as soon as possible the necessary consultation with Member States,

instructs the Director of the Radiocommunication Bureau

to make the necessary arrangements to convene meetings of the Conference Preparatory Meeting and to prepare a Report to WRC-99,

instructs the Secretary-General

to communicate this Resolution to concerned international and regional organizations.

ANNEX 2

RESOLUTION 722 (WRC-97) (GTPLEN1-4)

PRELIMINARY AGENDA FOR THE 2001 WORLD RADIOCOMMUNICATION CONFERENCE

The World Radiocommunication Conference (Geneva, 1997),

considering

a) that in accordance with Nos. 118 and 126 of the Convention of the International Telecommunication Union (Geneva, 1992), the general scope of the agenda for the 2001 World Radiocommunication Conference (WRC-01) should be established four years in advance;

b) Article 13 of the Constitution of the International Telecommunication Union (Geneva, 1992) regarding the competence and scheduling of world radiocommunication conferences and Article 7 of the Convention (Geneva, 1992) regarding their agendas;

c) the relevant Resolutions and Recommendations of previous world administrative radio conferences and world radiocommunication conferences,

resolves to give the view

that the following items should be included in the preliminary agenda of WRC-01, to be held in late 2001:

1 to take appropriate action in respect of those urgent issues that were specifically requested by the 1999 World Radiocommunication Conference (WRC-99);

2 on the basis of proposals from administrations and the Report of the Conference Preparatory Meeting, and taking account of the results of WRC-99, to consider and take appropriate action in respect of the following topics:

2.1 requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, taking into account Resolution **26 (WRC-97)**;

2.2 consideration of Article **S25** concerning the amateur and amateur-satellite services;

2.3 issues related to Appendix **S3**:

2.3.1 to consider the results of studies regarding the boundary between spurious and out-of-band emissions;

2.3.2 to consider the inclusion of general limits for out-of-band emissions in the Radio Regulations, in particular with regard to whether it is appropriate to do so, taking into account the results of ITU-R studies;

2.4 review of the frequency and channel arrangements in the MF and HF bands allocated on a primary basis to the maritime-mobile service, taking into account the use of new digital technology, in accordance with Resolution **347 (WRC-97)** (COM4-10);

2.5 to review in Appendix **S2/7** the Table of Transmitter Frequency Tolerances, taking into account the frequency tolerance limits specified in Recommendation ITU-R SM.1045;

2.6 to consider the status of allocations to the radiolocation service in the bands around 3.0 GHz and around 5.5 GHz; [the date of a conference is under discussion];

2.7 sharing between the FSS and FS in the 19 GHz band, when used bidirectionally by the FSS to provide feeder links for non-geostationary satellite systems in the mobile-satellite service;

2.8 to consider spectrum requirements for wideband aeronautical telemetry in the band between 3 and 30 GHz;

2.9 review of allocations to the space-research service (deep space) (space-to-Earth) and the inter-satellite service in the frequency range 32 - 32.3 GHz with a view to improving the sharing conditions between these services;

2.10 to consider Appendix **S13** and Resolution **331 (Rev.WRC-97)** with a view to their deletion and, if appropriate, consider related changes to Chapter SVII and other provisions of the Radio Regulations as necessary, taking into account the continued transition to the Global Maritime Distress and Safety System (GMDSS);

2.11 to consider the results of studies, and take necessary actions relating to:

2.11.1 the exhaustion of the maritime mobile service identity numbering resource (Resolution **344 (WRC-97)** (COM4-5));

2.11.2 shore-to-ship distress communication priorities (Resolution **348 (WRC-97)** (COM4-11));

2.12 consideration of the need to realign the allocations to the amateur, amateur-satellite and broadcasting services around 7 MHz on a worldwide basis, taking into account Recommendation **718 (WARC-92)**;

2.13 examination of the adequacy of the frequency allocations for HF broadcasting from about 4 MHz to 10 MHz, taking into account the seasonal planning procedures adopted by WRC-97, and to consider bringing forward the date of availability of the HF bands allocated by WARC-92 to the broadcasting service in response to Resolution **29 (WRC-97)** (COM4-16) and Resolution **537 (WRC-97)** (COM4-14);

3 to consider the results of the studies related to the following with a view to considering them for inclusion in the agendas of future conferences:

3.1 Resolution **528 (WARC-92)**;

3.2 possible allocations in the frequency bands above 275 GHz;

3.3 potential for sharing around 4 300 MHz between radio altimeters and space-based passive earth sensors;

3.4 additional allocations on a worldwide basis for the non-GSO/MSS with service links operating below 1 GHz in accordance with Resolution **728 (WRC-97)** (COM5-14);

3.5 allocations on a worldwide basis for feeder links in bands around 1.4 GHz to the non-geostationary mobile-satellite services with service links operating below 1 GHz, taking into account the results of ITU-R studies conducted in response to Resolution **127 (WRC-97)** (COM5-15);

3.6 use of frequency adaptive systems in the MF/HF bands in accordance with Resolution **729 (WRC-97**) (COM4-7);

3.7 allocation of the frequency band 14.5 - 14.8 GHz to the fixed-satellite service (Earth-to-space) in Region 3 (expansion of FSS to include other than feeder links of the BSS);

4 to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations which have been communicated by the 2001 Radiocommunication Assembly, in accordance with Resolution **28 (WRC-95)**; and decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in the Annex to Resolution **27 (Rev.WRC-97)**;

5 to consider such consequential changes and amendments to the Radio Regulations as may be necessitated by the decisions of the Conference;

6 in accordance with Resolution **95 (WRC-97)** (GTPLEN1-1), to review those Resolutions and Recommendations of the previous conferences with a view to their possible revision, replacement or abrogation;

7 to review, and take appropriate action on, the report from the Radiocommunication Assembly submitted in accordance with Nos. 135 and136 of the Convention of the ITU (Geneva, 1992);

8 to identify those items requiring urgent action by the radiocommunication study groups;

9 in accordance with Article 7 of the Convention of the ITU (Geneva, 1992):

9.1 to consider and approve the Report of the Director of the Radiocommunication Bureau on the activities of the Radiocommunication Sector since WRC-99;

9.2 to recommend to the Council items for inclusion in the agenda for the 2003 World Radiocommunication Conference,

invites the Council

to consider the views given in this Resolution,

instructs the Director of the Radiocommunication Bureau

to make the necessary arrangements to convene meetings of the Conference Preparatory Meeting and to prepare a Report to WRC-01,

instructs the Secretary-General

to communicate this Resolution to concerned international and regional organizations.

ANNEX 3

RESOLUTION ITU-R 2-2

CONFERENCE PREPARATORY MEETING

(1993-1995-1997)

The ITU Radiocommunication Assembly,

considering

a) that the duties and functions of the Radiocommunication Assembly, in preparing for World Radiocommunication Conferences (WRCs) are stated in Articles13 of the Constitution and 11 of the Convention of the ITU (Geneva,1992);

b) that special arrangements are necessary for such preparations,

resolves

1 that a Conference Preparatory Meeting (CPM) shall be set up on the basis of the following principles:

– that the CPM should be permanent;

– that it should address topics on the agenda of the immediately forthcoming conference and make provisional preparations for the subsequent conference;

– that invitations to participate should be sent to all ITU Member States/Radiocommunication Sector Members;

– that documents should be distributed to all ITU Member States/Radiocommunication Sector Members wishing to participate in the CPM;

– that the terms of reference of the CPM should include the updating and rationalization of material from Radiocommunication Study Groups and the Special Committee, together with consideration of new material submitted to it;

2 that the scope of the CPM shall be:

– on the basis of contributions from administrations, the Special Committee, the Radiocommunication Study Groups (see also Provision No.156 of the Convention (Geneva 1992)), and other sources (see Article19 of the Convention (Geneva 1992)) concerning the regulatory, technical, operational and procedural matters to be considered by World and Regional Radiocommunication Conferences, the CPM shall prepare a consolidated Report to be used in support of the work of such conferences. In the preparation of these Reports, differences in approach as contained in the source material shall be reconciled to the extent possible;

3 that the working methods shall be as presented in Annex1,

instructs the Director

1 to draw the attention of the 1997 World Radiocommunication Conference (Geneva, 1997) (WRC-97) to this Resolution and to invite this Conference to take it into consideration.

ANNEX 1 TO RESOLUTION ITU-R 2-2

Working methods for the Conference Preparatory Meeting

1 Regulatory studies of technical and operational matters will be undertaken by the appropriate Study Groups.

2 The CPM will normally hold two meetings during the interval between WRCs.

2.1 The first meeting will be for the purpose of coordinating the work programmes of the relevant Study Groups, and preparing a draft structure for the CPM Report, based on the agenda for the next two WRCs, and for taking into account any directives which may have come from the previous WRC. This meeting will be of short duration and will normally occur in the week following the conclusion of the previous WRC, and should be associated with a meeting of Study Group Chairmen and Vice-Chairmen.

2.2 The second meeting will be for the purpose of preparing the Report for the next WRC. This meeting shall also review progress on preparatory studies for agenda items to be considered at the WRC following the next scheduled WRC. The meeting will be of adequate duration to accomplish the necessary work (two to three weeks) and will be timed to ensure publication of the Final Report at least six months before the next WRC.

2.3 The first meeting will identify issues for study in preparation for the next WRC and, to the extent necessary, for the subsequent WRC. These issues should be derived from the draft and provisional conference agendas and should, as far as possible, be self contained and independent. For each issue a single group (which could be a Study Group, Task Group or Working Party, etc.) should be identified to take responsibility for the preparatory work, inviting input and/or participation from other groups as necessary. As far as possible, existing groups should be used for this purpose, with new groups being established only where this is considered to be necessary.

2.4 Meetings of the groups identified should be scheduled to facilitate maximum participation by all interested members. The groups should base their output on existing material plus new contributions. The output of each group should form contributions to the CPM Final Report to the WRC without the need for formal consideration by the relevant Study Group. Where the relevant Study Group has not considered the output from the respective group, this should be clearly indicated.

3 The work of the CPM will be directed by a Chairman and two Vice-Chairmen. The Chairman will be responsible for preparing the Report to the next WRC.

4 The Chairman or the CPM may appoint Chapter Rapporteurs to assist in guiding the development of the text that will form the basis of the CPM Report, and to provide continuity of material through the consolidation of Study Group texts into a cohesive report.

5 The Chairman shall convene a meeting of the responsible Working Party/Task Group Chairmen, Study Group Chairmen, CPM Chairmen and Vice-Chairmen, Chapter Rapporteurs and Radiocommunication Bureau Staff to consolidate the output from the responsible Working Parties or Task Groups into a draft CPM Report, that will be an input document to the CPM.

6 The consolidated draft CPM Report shall be translated into the three working languages of the Union and distributed to Member States a minimum of two months prior to the date schedule for the second meeting of the CPM.

7 Every effort shall be made to ensure that the volume of the final CPM Report is kept to a minimum. To this end, Working Parties/Task Groups/Study Groups are urged to maximize the use of references to approved ITU-R Recommendations in preparing CPM texts.

8 In relation to working arrangements, the CPM shall be considered as an ITU meeting in accordance with No. 172 of the Constitution (Geneva, 1992).

9 In preparing for the CPM, maximum use should be made of electronic means for the distribution of contributions to participants.

10 The other working arrangements shall be in accordance with the relevant provisions of Resolution ITU-R 1.

ANNEX 4

REPORT ON THE FIRST CONFERENCE PREPARATORY MEETING FOR WRC-99

The World Radiocommunication Conference (Geneva, 1997) recommended to the Council an Agenda for the World Radiocommunication Conference 1999 (WRC-99) and a preliminary Agenda for the World Radiocommunication Conference 2001 (WRC-01).

The 1997 Radiocommunication Assembly by its Resolution ITU-R 2-2 (attached as Annex 3) established a Conference Preparatory Meeting (CPM) process. The WRC-97 dedecided that preparatory studies for the WRC-99 are to be carried out by this process. The CPM, for each conference, will normally hold two meetings during the interval between WRCs.

The first Conference Preparatory Meeting was held in Geneva from 26 to 27 November 1997. It organized and coordinated conference preparatory studies for WRC-99 and identified preliminary studies for WRC-01. A structure for the Report to WRC-99 was agreed together with a preparatory process, working procedures, and a chapter structure was developed. The meeting also appointed a Rapporteur for each chapter to assist the CPM Chairman in managing the development and flow of draft Report contributions. Additional information not identified in the document CPM preparation for WRC-99 may be considered by the relevant responsible Group as appropriate.

It was agreed that all appropriate regulatory/procedural studies on relevant agenda items will be carried out by the Special Committee on Regulatory/Procedural matters (SC) on the basis of proposals from the membership of the ITU and the relevant ITU-R Working Party, Task Group, Joint Rapporteur Group.

134 participants from 42 administrations and 5 international organizations attended the first CPM. The meeting considered 7 contributions and prepared the following documents:

– Chapter structure and working procedures;

– Outline of the CPM Report to WRC-99;

– CPM preparation for WRC-99;

– Outline of the CPM Report to WRC-01;

– CPM preparation for WRC-01.

It was agreed that it would not be possible to assign page limits on a per chapter basis at this time. The specific chapter limits will be developed by inter-action between the Rapporteurs and the Chairman as the work progresses. Due to the need for prudent resource use and timely distribution of the draft version of the CPM-99 Report, the responsible Groups are invited to provide their contributions in a concise form and following the chapter structure by 9 November 1998. It was also agreed to hold a meeting of the Study Group/responsible Group Chairmen, CPM Chapter Rapporteurs and CPM Chairman/Vice-Chairmen in mid-November 1998, for the purpose of consolidating the inputs to the draft Report. Approximately six weeks after the conclusion of the consolidation, the draft Report will be distributed to all members.

The second meeting, proposed from 12 to 23 April 1999, will prepare the CPM Report to the 1999 World Radiocommunication Conference in accordance with the structure agreed by this meeting.

ANNEX 5

CHAPTER STRUCTURE AND WORKING PROCEDURES

1 Chapter structure

1) WRC Agenda Item X.xx *Insert text of relevant agenda item*

2) Summary of technical and operational studies, including alist of relevant ITU-R Recommendations.

3) Analysis of the results of studies relating to the possible methods of satisfying agenda item.

4) Methods to satisfy the Agenda item for consideration by the WRC and the advantages and disadvantages of each method.

5) Regulatory and procedural considerations.

2 Duties of Chapter Rapporteurs

1) To act for the Chairman of CPM to ensure that the consistency of format and structure and the guidelines of amount of text are observed.

2) To ensure integration of most recent Working Party, Task Group and Joint Rapporteur Group outputs into consolidated CPM text by consultation with or assistance from the Chairmen of Working Parties, Task Groups and Joint Rapporteur Groups so that CPM work is complete and on time.

3 CPM-99 working procedures

The CPM agreed that the following working procedures be employed in carrying out these studies:

1) A single responsible Group is identified for each agenda item, or sub-item where an agenda item is easily divisible into coherent work packages, eg. in relation to a specific Resolution or Recommendation or part thereof.

2) The responsible Group has the responsibility to prepare a draft element of the CPM Report addressing the specific agenda item or sub-item for which it has main responsibility.

3) The concerned groups (Working Parties or Task Groups,etc.) for any item or sub-item, will not contribute directly to the CPM, but may contribute to the work of the responsible Group for that item or sub-item, by the following means in order of preference:

   – participation of members of the concerned groups in the work and meetings of the responsible Group;

   – appointment of rapporteurs to represent their interests in the work and meetings of the responsible Group;

   – liaison statements if time permits.

4) As far as possible, concerned groups should avoid establishing specific groups or meetings to agree contributions to the responsible Group, as this will inevitably create some duplication with the work of the responsible Group, and increase the number of meetings that the interested experts would need to attend.

5) The responsible Group should ensure that the necessary coordination with the concerned Groups is carried out.

6) The output of the responsible Group shall be submitted to the CPM in accordance with § 2.4 of the working methods outlined in Resolution ITU-R 2-2 (see Annex 3).

ANNEX 6

DRAFT CPM REPORT TO THE WRC-99

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CPM-99 Report outline

Chapter	Section	Topic[2]	Resolutions	Agenda item
1		**Mobile and radionavigation services**		
	1.1	IMT-2000	212	1.6
	1.2	Use of HF bands by aeronautical and maritime mobile services	346 (COM4-9)	1.7
	1.3	Digital technology in the 156 - 174 MHz band for maritime mobile service	342 (COM4-3)	1.18
	1.4	Use of the 415 - 526.5 kHz band		8.3
	1.5	Use of HF band by mobile services for changing needs		8.4
2		**Mobile-satellite and radionavigation-satellite services**		
	2.1	Use of the band 1 500 - 1 700 MHz by the MSS (Generic Allocation)	218 (COM5-24)	1.10
	2.2	Use of the bands 1 559 - 1 567 MHz and 1 675 - 1 710 MHz by the MSS	213 220 (COM5-31)	1.9
	2.3	Constraints on existing allocations and additional allocations for non-GSO MSS below 1 GHz	214 (Rev. WRC-97) 219 (COM5-25)	1.11
	2.4	Issues concerning the radionavigation-satellite service		1.15
	2.4.1	New allocations to radionavigation satellite from 1 - 6 GHz		1.15.1
	2.4.2	Addition of space-to-space direction to radionavigation satellite in the bands 1 215 - 1 260 MHz and 1 559 - 1 610 MHz		1.15.2
	2.4.3	Status of allocations to services other than RNSS in 1 559 - 1 610 MHz		1.15.3
	2.5	Mobile satellite (secondary) in 14.0 - 14.5 GHz to cover aeronautical	216 (COM5-2)	8.5

[2] The wording under different topics is abbreviated. It is not the intention to change the relevant agenda items.

3		**Non-GSO FSS issues**		
	3.1	review and, if appropriate, revise the power limits appearing in Articles **S21** and **S22** in relation to the sharing conditions among non-GSO FSS, GSO FSS, GSO BSS, space sciences and terrestrial services, to ensure the feasibility of these power limits and that these limits do not impose undue constraints on the development of these systems and services	130 (COM5-18) 538 (COM5-19) 131 (COM5-23)	1.13.1
	3.2	consider the inclusion of limits similar to those in Articles **S21** and **S22** in other frequency bands, or other regulatory approaches to be applied in relation to sharing situations	130 (COM5-18)	1.13.2
4		**Space science services and radio astronomy**		
	4.1	Passive allocations above 71 GHz	723 (COM5-1)	1.16
	4.2	Passive allocations at the band 18.6 - 18.8 GHz		1.17
	4.3	Possible allocations up to 3 MHz for telecommand between 100 MHz and 1 000 MHz	723 (COM5-1)	8.6
	4.4	Possible allocations up to 6 MHz to EESS between 420 and 470 MHz	727 (COM5-13)	8.7
5		**Appendices S30 and S30A**		
	5.1	Progress report from the Director	53 (COM4-20)	1.21
	5.2	to consider the issues related to the application of Nos. **S9.8**, **S9.9** and **S9.17** and the corresponding parts of Appendix **S5** with respect to Appendices **S30** and **S30A**, with a view to possible deletion of Articles 6 and 7 of Appendices **S30** and **S30A**, also taking into consideration Recommendation **35 (WRC-95)**	Rec. 35 (WRC-95)	1.20
	5.3	Progress report on ITU-R studies	532 (PLEN-3)	1.19

6		**Fixed and fixed-satellite services**		
	6.1	High density service in the fixed 31.8 - 33.4 GHz band High density service fixed above 30 GHz availability FSS in the 41.5 - 42.5 GHz band and protection of RAS Criteria and sharing methods FSS in the 40.5 - 42.5 GHz band. Sharing between the FS and other services in the band 37 - 40 GHz. Use of the 40.5 - 42.5 GHz band by FSS	126 (COM5-11) 726 (COM5-12) 128 (COM5-16) 129 (COM5-17) 133 (COM5-28) 134 (COM5-29)	1.4
	6.2	High altitude platform stations	122 (COM5-7)	1.5
	6.3	Quasi-geostationary-satellite networks		8.1
	6.4	FSS networks TT&C requirements		8.2
	6.5	Changes in R3 for 1 350 - 1 400 MHz to permit FS		8.8
	6.6	Earth stations located on board of vessels in the bands 3 700 -4 200 MHz and 5 925 - 6 425 MHz		1.8
	6.7	Sharing between feeder links of non-GSO MSS and GSO FSS in the bands 19.3 - 19.7 GHz and 29.1 - 29.5 GHz	121 (Rev. WRC-97)	1.12
	6.8	Feasibility of non-GSO MSS feeder links in the bands 15.43 - 15.63 GHz	123 (COM5-8)	1.14
7		**Other matters**		
	7.1	Finalize review of Appendix S3	Rec. 66 (Rev. WRC-97)	1.2
	7.2	ITU-R study results of App. S7 [28]		1.3
	7.3	Incorporation by reference	Res.27, 28	2

ANNEX 7

Allocations of ITU-R preparatory work for the 1999 World Radiocommunication Conference

Topic	Responsible Group[3]	Action to be taken by the ITU-R Study Group	Concerned Group[4]
to recommend to the Council that a world radiocommunication conference be held in late 1999[1] for a period of four weeks, with the following agenda:			
[1] See Resolution **[50 (WRC-97)]** (GTPLEN1-2).			
1 on the basis of proposals from administrations and the Report of the Conference Preparatory Meeting, taking account of the results of WRC-97, and with due regard to the requirements of existing and planned services in the bands under consideration, to consider and take appropriate action in respect of the following topics:			
1.1 requests from administrations to delete their country footnotes or to have their country's name deleted from footnotes, if no longer required, in accordance with Resolution **[26] (Rev.WRC-97)**;			
Resolution **26 (Rev.WRC-97)** Footnotes to the Table Of Frequency Allocations In Article S5 Of The Radio Regulations		No action	
1.2 to finalize remaining issues in the review of Appendix **S3** to the Radio Regulations with respect to spurious emissions for space services, taking into account Recommendation **66 (Rev.WRC-97)** and the decisions of WRC-97 on adoption of new values of spurious emissions for space services taking effect at a future time;			
Recommendation **66 (Rev.WRC-97)** Studies of the maximum permitted levels of unwanted emissions	TG 1/5	1. study as a matter of urgency the question of spurious emissions resulting from space services transmissions, and, on the basis of those studies, develop Recommendations for maximum permitted levels of spurious emissions in terms of mean power of spurious components supplied by the transmitter to the antenna transmission line;	
1.3 to consider the results of ITU-R studies in respect of Appendix **S7 [28]** on the method for the determination of the coordination area around an earth station in frequency bands shared among space services and terrestrial radiocommunication services and take the appropriate decisions to revise this Appendix;			
Modification of Appendix **S7 [28]**	TG 1/6	to continue studies in accordance with Question ITU-R 212/1	SGs 3, 4, 7, 8, 9, 10, 11

[3] All appropriate regulatory/procedural studies on relevant agenda items will be carried out by the Special Committee on Regulatory/Procedural matters (SC) on the basis of proposals from the membership of the ITU and the relevant ITU-R Working Party/Task Group/Joint Rapporteur Group.

[4] This list of concerned Groups is not exclusive, other Groups may also be included.

1.4 to consider issues concerning allocations and regulatory aspects related to Resolution **126 (WRC-97)** (COM5-11)**, 726 (WRC-97)** (COM5-12), **128 (WRC-97)** (COM5-16)**, 129 (WRC-97)** (COM5-17), **133 (WRC-97)** (COM5-28) and **134 (WRC-97)** (COM5-29);			
Resolution **126 (WRC-97)** (COM5-11) Use of the frequency band 31.8 - 33.4 GHz for high-density systems in the fixed service	JRG 7D-9D WP 9D	to conduct, as a matter of urgency, the appropriate studies in time for WRC-99 to determine what criteria would be necessary for sharing between stations in the fixed service and stations in the other services to which the frequency band 31.8 - 33.4 GHz is allocated.	WP 8B
Resolution **726 (WRC-97)** (COM5-12) Frequency bands above 30 GHz available for high density applications in the fixed service	WP 9B JRG 7D-9D	1 to undertake studies leading to the identification of system characteristics of high-density systems in the fixed service in the bands 31.8 - 33.4 GHz, 51.4 - 52.6 GHz, 55.78 - 59 GHz and 64 - 66 GHz; 2 to undertake, as a matter of urgency, studies of technical and operational criteria and methods to facilitate sharing between high-density systems in the fixed service and other services in the bands listed above;	SGs 3 and 4
Resolution **128 (WRC-97)** (COM5-16) Allocation to the fixed-satellite (space-to-Earth) service in the 41.5 - 42.5 GHz band and protection of the radio astronomy service in the 42.5 - 43.5 GHz band	WP 7D	1 to study, as a matter of urgency, the potential for harmful interference that space stations in the fixed-satellite (space-to-Earth) service operating in the 41.5 - 42.5 GHz band may cause to stations in the radio astronomy service operating in the 42.5 - 43.5 GHz band; 2 to identify technical and operational measures that may be taken to protect stations in the radio astronomy service operating in the 42.5 - 43.5 GHz band, including geographical separation and out-of-band emission limits to be applied to space stations operating in the fixed-satellite service in the 41.5 - 42.5 GHz band, as well as measures that may be implemented to reduce susceptibility of stations in the radio astronomy service to harmful interference; 3 to report on the results of these studies to the CPM of WRC-99,	SGs 1, 3 and 4

Resolution **129 (WRC-97)** (COM5-17) Criteria and methodologies for sharing between the fixed-satellite service and other services with allocations in the band 40.5 - 42.5 GHz	WP 4A	1 to undertake, as a matter of urgency, studies of appropriate criteria and methodologies for sharing, including power flux-density limits, between the fixed-satellite service and other services with allocations in the band 40.5 - 42.5 GHz; 2 to report on the results of these studies to the CPM of WRC-99;	SGs 9, 10 and 11 and JWP 10-11S

Resolution **134 (WRC-97)** (COM5-29) Use of the frequency band 40.5 - 42.5 GHz by the fixed-satellite service		No studies	
Resolution **133 (WRC-97)** (COM5-28) Sharing between the fixed service and other services in the band 37 - 40 GHz	WP 4-9S WP 9B	1 to conduct studies in time for WRC-99 to determine whether the power flux-density limits included in Article **S21** adequately protect terrestrial services from fixed-satellite service networks; 2 to conduct other studies leading to technical and operational recommendations to facilitate sharing between terrestrial and space services;	SGs 3, 4 and 7
1.5 to consider regulatory provisions and possible additional frequency allocations for services using high altitude platform stations, taking into account the results of ITU-R studies conducted in response to Resolution **122 (WRC-97)** (COM5-7);			
Resolution **122 (WRC-97)** (COM5-7) Use of the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz by high altitude platform stations in the fixed service and by other services	WP 9B WP 4-9S	3 to request the ITU-R to urgently carry out studies on the appropriate technical sharing criteria for the situations referred to in *considering* h), with priority given to the sharing with other systems in the fixed and fixed-satellite services, in particular the determination of the appropriate geographic separation from feeder links in the broadcasting-satellite service; h) that technical studies are required in order to ascertain the extent to which sharing of the bands 47.2 - 47.5 GHz and 47.9 - 48.2 GHz is feasible between systems using high altitude platforms in the fixed service and those systems in the fixed, fixed-satellite and mobile services, and to ascertain the requirements to protect radio astronomy services in adjacent bands from spurious emissions;	JWP 10-11S and SG 3 SGs 1, 3, 4, 7 and 8

1.6 issues related to the IMT-2000	TG 8/1		SG 7 and 9
1.6.1 review of spectrum and regulatory issues for advanced mobile applications in the context of IMT-2000, noting that there is an urgent need to provide more spectrum for the terrestrial component of such applications, and priority should be given to terrestrial mobile spectrum needs, and adjustments to the Table of Frequency Allocations as necessary; 1.6.2 identification of a global radio control channel to facilitate multimode terminal operation and worldwide roaming of IMT-2000;			
Resolution **212 (Rev.WRC-97)** Implementation of International Mobile Telecommunications (IMT-2000)	TG 8/1	to continue its studies with a view to developing suitable and acceptable technical characteristics for IMT-2000 that will facilitate worldwide use and roaming, and ensure that IMT-2000 can also meet the telecommunication needs of the developing countries and rural areas,	SGs 7 and 9
1.7 review the use of the HF bands by the aeronautical mobile (R) and maritime-mobile services with a view to protecting the operational, distress and safety communications the use of the HF bands by the aeronautical mobile (R) and maritime-mobile services with a view to protecting the operational, distress and safety communications, taking into account Resolution **346 (WRC-97)** (COM4-9)**:** "Protection of distress and safety communications on the frequencies 12 290 kHz and 16 420 kHz from harmful interference caused by these frequencies being used also for non-safety calling";			
	WP 8B	to study the use of the HF bands by the aeronautical mobile (R) and maritime-mobile services with a view to protecting the operational, distress and safety communications and to continue studies in accordance with Questions ITU-R 92-1/8, 110/8, 111/8 and 62-2/8;	
1.8 to consider regulatory and technical provisions to enable earth stations located on board vessels to operate in the fixed-satellite service networks in the bands 3 700 - 4 200 MHz and 5 925 - 6 425 MHz, including their coordination with other services allocated in these bands;			
	WP 4-9S		SG 1
1.9 take into account the results of ITU-R studies in evaluating the feasibility of an allocation in the space-to-Earth direction to the mobile-satellite service in a portion of the 1 559 - 1 567 MHz frequency range, in response to Resolutions **213** and **220 (WRC-97)** (COM5-31);			
Resolution **213** Sharing studies concerning possible use of the band 1 675 - 1 710 MHz by the mobile-satellite service	WP 8D	as a matter of urgency, to complete the technical and operational studies on the feasibility of sharing of the band concerned between the services referred to in *d)* and *g)* above and the MSS, and on the required means for preventing harmful interference,	SG 7 (completed its studies)

Resolution **220 (WRC-97)** (COM5-31) Studies to consider the feasibility of using a portion of the band 1559 - 1610 MHz by the mobile-satellite service (space-to-Earth)	WP 8D	to study, as a matter of urgency, the technical criteria and operational and safety requirements to determine if sharing between the aeronautical radionavigation and radionavigation-satellite services operating, or planned to operate, in the band 1559 - 1610 MHz, and the mobile-satellite service in a portion of the 1559 - 1567 MHz frequency range, is feasible, taking into account recognizing: 1 the essential need to protect systems operating in the aeronautical radionavigation and radionavigation-satellite services in the band 1559 - 1610 MHz; 2 the requirement for additional spectrum for the mobile-satellite service; 3 that Resolution **213 (Rev.WRC-95)** identifies the possible use in parts of the band 1675 - 1710 MHz in the Earth-to-space direction and invites ITU-R to investigate potentially suitable downlink bands that may assist in meeting the requirements of the MSS;	SGs 3 and 7
1.10 to consider results of ITU-R studies in accordance with Resolution **218 (WRC-97)** (COM5-24) and take appropriate action on this subject;			
Resolution **218 (WRC-97)** (COM5-24) Use of the bands 1525 - 1559 MHz and 1626.5 - 1660.5 MHz by the mobile-satellite service	WP 8D	1 to develop the assumptions and methodologies and information on GMDSS and AMS(R)S communication actual traffic usage and growth to determine the future spectrum requirements for the provision of distress, urgency and safety communications in the GMDSS by mobile satellite and AMS(R)S communications with priority 1 to 6 of Article **S44**; 2 to determine the feasibility of prioritization, and real time pre-emptive access and, if necessary, interoperability between different mobile-satellite systems for GMDSS and AMS(R)S, in order to achieve the most flexible and practical use of the generic allocations; 3 to complete and report the results of studies called for in *resolves* 1 and 2 above by WRG99,	SG 7

1.11 to consider constraints on existing allocations and to consider additional allocations on a worldwide basis for the non-GSO/MSS below 1GHz, taking into account the results of ITU-R studies conducted in response to Resolutions **214 (Rev.WRC-97)** and **219 (WRC-97)** (COM5-25);			
Resolution **214 (Rev.WRC-97)** Sharing studies relating to consideration of the allocation of bands below 1 GHz to the non-geostationary mobile-satellite service See also Resolution **728 (WRC-97)** (COM5-14)	WP 8D	1 to study and develop recommendations, as a matter of urgency, on the performance requirements, sharing criteria and technical and operational issues relating to sharing between both the existing and planned services, and non-GSO MSS below 1 GHz; 2 as a matter of urgency, to carry out studies in preparation for a future competent Conference (WRC-99), including a review of the operating constraints referred to in *noting* c) necessary to protect the existing and planned development of all of the services to which the bands below 1 GHz are allocated, having regard to *noting* d); 3 as a matter of urgency, to carry out studies in preparation for a future competent Conference (WRC-99) with respect to interference mitigation techniques, such as the dynamic channel activity assignment system described in Recommendation ITU-R M.1039-1, necessary to permit the continued development of all of the services to which the bands are allocated; 4 to carry out a review for a future competent conference of the technical and regulatory constraints on non-GSO MSS allocations in the bands below 1 GHz, having regard to *considering* d); 5 to bring the results of these studies to the attention of the next competent Conference (WRC-99) and the relevant preparatory meetings,	SGs 11, 7, 10, 3, 9 Coordination with WP11C is necessary.

Resolution **219 (WRC-97)** (COM5-25) Studies relating to consideration of the allocation to the non-geostationary mobile-satellite service in the meteorological aids band 405 - 406 MHz and the impact on primary services allocated in the adjacent bands	WP 7D	1 as a matter of urgency, with the participation of WMO, to assess further the current and future requirements of the meteorological aids service in the band 401 - 406 MHz, taking into account the requirements of the earth exploration-satellite service and the meteorological-satellite service in the band 401 - 403 MHz; 2 as a matter of urgency, with the participation of WMO, to consider the possible transition of the meteorological aids service out of the band 405 - 406 MHz, which would minimize the impact on the meteorological aids service, while taking into account requirements for the implementation of non-GSO MSS; 3 to consider, based on the outcome of 1 and 2 above, a possible transition plan, including a transition date at which time meteorological aids could migrate their operations out of the band 405 - 406 MHz and MSS operations could commence; 4 as a matter of urgency, to study, with the participation of IUCAF and other relevant entities, the impact of unwanted emissions on the COSPAS-SARSAT system in the band 406 - 406.1 MHz and the radio astronomy service in the band 406.1 - 410 MHz, and identify appropriate protection measures for these services,	SGs 1, 3, 8 and 9 Coordination with WP8D is necessary.
1.12 to consider the progress of studies on sharing between feeder links of non-geostationary-satellite networks in the mobile-satellite service and geostationary-satellite networks in the fixed-satellite service in the bands 19.3 - 19.7 GHz and 29.1 - 29.5 GHz taking into account Resolution **121 (Rev.WRC-97)**;			
Resolution **121 (Rev.WRC-97)** Continued development of interference criteria and methodologies for fixed-satellite service coordination between feeder links of non-geostationary satellite networks in the mobile-satellite service and geostationary-satellite networks in the fixed-satellite service in the bands 19.3 - 19.7 GHz and 29.1 - 29.5 GHz	WP 4A	1 to undertake, as a matter of urgency, the continued development of appropriate permissible interference criteria for both non-GSO/MSS feeder links and GSO/FSS networks operating in the bands 19.3 - 19.7 GHz and 29.1 - 29.5 GHz; 2 to undertake, as a matter of urgency, studies of interference mitigation techniques (including, *inter alia*, those techniques listed in *considering* d)) which could facilitate coordination between non-GSO/MSS feeder links and GSO/FSS networks; 3 to undertake, as a matter of urgency, studies to develop coordination methodologies for GSO/FSS networks and non-GSO/MSS feeder links operating in the bands 19.3 - 19.7 GHz and 29.1 - 29.5 GHz on an equal basis,	SGs 3, 7 and 8

1.13 on the basis of the results of the studies in accordance with Resolutions **130 (WRC-97)** (COM5-18), **538 (WRC-97)** (COM5-19) and **131 (WRC-97)** (COM5-23): 1.13.1 review and if appropriate, revise the power limits appearing in Articles **S21** and **S22** in relation to the sharing conditions among NGSO FSS, GSO FSS, GSO BSS, space sciences and terrestrial services, to ensure the feasibility of these power limits and that these limits do not impose undue constraints on the development of these systems and services; 1.13.2 consider the inclusion in other frequency bands of similar limits in Articles **S21** and **S22**, or other regulatory approaches to be applied in relation to sharing situations;			
Resolution **130 (WRC-97)** (COM5-18) Use of non-geostationary systems in the fixed-satellite service in certain frequency bands	JTG 4-9-11	1 taking into account *considering further* a), to conduct, as a matter of urgency and complete, in time for consideration by WRC-99: a) the appropriate technical, operational and regulatory studies to review the regulatory conditions relating to the coexistence among NGSO and GSO systems in the FSS in order to ensure that they do not pose undue constraints on the development of NGSO and GSO FSS systems; b) the development of a methodology for calculating the power levels produced by NGSO FSS systems and the compliance of these levels with the limits referred to in *resolves* 1 and 2 above; c) the studies relating to the sharing criteria to be applied for determining the need for coordination between NGSO FSS systems on the one hand and NGSO systems in the FSS and in other space services and terrestrial services on the other hand, with a view to promote efficient use of spectrum/orbit resources and equitable access to these resources by all countries; 2 taking into account *considering further* l), to undertake the development of power limits or other frequency sharing mechanisms among GSO, NGSO and terrestrial systems in the frequency bands other than those referred to in *resolves* 1 above and where NGSO FSS systems are likely to be implemented and GSO systems are used or expected to be used extensively, NOTE - See Attachment 1 to Annex 7 for further details concerning specific aspects of these studies in relation to frequency sharing between NGSO and GSO FSS	SGs 7 and 8

Resolution **538 (WRC-97)** (COM5-19) Use of the frequency bands covered by Appendices 30 and 30A by non-GSO systems in the fixed-satellite service	JTG 4-9-11	a) to conduct, as a matter of urgency and in time for consideration by WRC-99, the appropriate technical, operational and regulatory studies to review the regulatory provisions concerning the operation of non-GSO FSS systems in the frequency bands referred to in *resolves* 1 a) above in order to ensure that these conditions ensure appropriate protection of the Plans and their future modifications and do not place unreasonable constraints on the development of GSO systems in these bands; b) to undertake and complete the development of a methodology for calculating the power levels produced by non-GSO FSS systems and the compliance of these levels with the limits referred to in *resolves* 1 a) and 1 b) above; c) to complete the studies relating to the sharing criteria to be applied for determining the need for coordination between non-GSO FSS systems, with a view to promoting efficient use of spectrum/orbit resources and equitable access to these resources by all countries; d) to report to CPM-99 on the conclusion of these studies,	
Resolution **131 (WRC-97)** (COM5-23) Power flux-density limits applicable to non-gso fss systems for protection of terrestrial services in the bands 10.7 - 12.75 GHz and 17.7 - 19.3 GHz	JTG 4-9-11	to study, as a matter of urgency, the appropriate power flux-density values to be applied to non-GSO networks in the aforementioned bands to ensure protection of the fixed service without unduly constraining the development of either type of network,	SGs 7, 10

1.14 review the results of the studies on the feasibility of implementing non-GSO MSS feeder links in the 15.43 - 15.63 GHz in accordance with Resolution **123 (WRC-97)** (COM5-8);			
Resolution **123 (WRC-97)** (COM5-8) Feasibility of implementing feeder links of non-geostationary satellite networks in the mobile-satellite service in the band 15.43 - 15.63 GHz (space-to-Earth) while taking into account the protection of the radio astronomy service, the earth exploration-satellite (passive) service and the space research (passive) service in the band 15.35 - 15.4 GHz	WP 4A	1 as a matter of urgency, to carry out studies in preparation for the CPM for WRC-99 with an objective to study the feasibility of implementing non-GSO MSS feeder links in the 15.43-15.63 GHz band, taking into account the above *considerings*; 2 to study, as a matter of urgency, the interference potential of feeder links for NGSO satellites in the mobile-satellite service to the radio astronomy service in the 15 GHz band and develop recommendations to reduce the out-of-band interference;	SGs 7 and 8
1.15 issues related to the radionavigation-satellite service:			
1.15.1 to consider new allocations to the radionavigation-satellite service required to support developments in the range from 1 to 6 GHz;	WP 8D	to study the feasibility of sharing between the RNSS and other services in the range 1- 6 GHz;	SGs 4, 7 and 9
1.15.2 to consider the addition of the space-to-space direction to the radionavigation-satellite service allocations in the 1215 - 1 260 MHz and 1 559 - 1 610 MHz frequency bands;	WP 8D	to study the feasibility of sharing the RNSS (space-to-space) with the existing systems operating in these bands;	SG 7
1.15.3 to consider the status of allocations to services other than the radionavigation-satellite (RR **S5.355** and **S5.359**) in the 1 559 - 1 610 MHz band;	WP 8D	to continue studies in accordance with Question 218/8,	SG 7
1.16 to consider allocation of frequency bands above 71 GHz to the earth exploration-satellite (passive) and radio astronomy services, taking into account Resolution **723 (WRC-97)** (COM5-1);			
Resolution **723 (WRC-97)** (COM5-1) Consideration by a future competent world radiocommunication conference of issues dealing with allocations to science services	WP 7D	to complete the necessary studies, as a matter of urgency, taking into account the present use of allocated bands, with a view to presenting, at the appropriate time, the technical information likely to be required as a basis for the work of the Conference,	SGs 3, 8 and 9
1.17 to consider possible worldwide allocation for the earth exploration-satellite (passive) and space research (passive) services in the band 18.6 - 18.8 GHz taking into account the results of the ITU-R studies;			
Worldwide allocation for the EES (passive) and SR (passive) services in the band 18.6 - 18.8 GHz	WP 7D	to continue studies in accordance with Questions ITU-R 215/7 and 67-1/4	SGs 4 and 9 Coordination with SGs 4 and 9 is necessary.

1.18 consider the use of new digital technology for the maritime-mobile service in the band 156-174 MHz and consequential revision of Appendix **S18 [18]** taking into account Resolution **342 (WRC-97)** (COM4-3);			
Resolution **342 (WRC-97)** (COM4-3) Review of new technology to provide improved efficiency in the use of the band 156 - 174 MHz by stations in the maritime-mobile service	WP 8B	to continue studies on the following with a view to providing a Report to the WRC-99: i) to identify the future requirements of the maritime-mobile service; ii) to identify suitable technical characteristics of the system or interoperable systems to replace the existing technology; iii) to identify necessary modifications to the frequency plan contained within Appendix **S18**; iv) to recommend a timetable for the introduction of new technology and the necessary changes; v) to study and recommend how new technology can be introduced without harming the distress and safety requirements,	
1.19 to consider the report of the IRG submitted by the Director of the Radiocommunication Bureau and determine whether it is possible to undertake replanning in accordance with Resolution **532 (WRC-97)** (COM4-22) for completion by a subsequent competent conference,			
Resolution **532 (WRC-97)** (PLEN-3) Review and possible revision of the 1997 BSS Plans for Regions 1 and 3	JWP 10-11S	to study, as a matter of urgency, the technical possibilities for increasing the minimum capacity assigned to all Regions 1 and 3 countries in the Plans for Regions 1 and 3 contained in Appendices **30** and **30A**, in cooperation with the IRG and in accordance with the principles set out in Annex 1; Annex 2 also contained items to be studied (see Attachment 2),	In close collaboration with the IRG.
1.20 to consider the issues related to the application of Nos **S9.8**, **S9.9** and **S9.17** and the corresponding parts of Appendix **S5** with respect to Appendices **S30** and **S30A**, with a view to possible deletion of Articles 6 and 7 of Appendices **S30** and **S30A**, also taking into consideration Recommendation **35 (WRC-95)**;			
	SC	to study the issues related to the application of Nos **S9.8**, **S9.9** and **S9.17** and the corresponding parts of Appendix **S5** with respect to Appendices **S30** and **S30A**, with a view to possible deletion of Articles 6 and 7 of Appendices **S30** and **S30A**, also taking into consideration Recommendation **35 (WRC-95)**;	WP 10-11S in consultation with the IRG
1.21 consider report from the Radiocommunication Bureau on results of the analysis in accordance with Resolution **53 (WRC-97)** (COM4-20) and take appropriate actions;			
Resolution **53 (WRC-97)** (COM4-20) Updating of the "remarks" columns in the tables of Article 9A of Appendix 30A and article 11 of Appendix 30	BR	the Radiocommunication Bureau shall report the results of its analyses and the final lists of administrations to be included in the modified "Remarks" columns to WRC-99,	
2 to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations which have been communicated by the associated Radiocommunication Assembly, in accordance with Resolution **28 (WRC-95)**; and decide whether or not to update the corresponding references in the Radio Regulations, in accordance with principles contained in the Annex to Resolution **27 (Rev.WRC-97)**;			

Resolution **27 (Rev.WRC-97)** References to ITU-R and ITU-T Recommendations in the Radio Regulations Resolution **28 (WRC-95)** Revision of references to ITU-R Recommendations incorporated by reference in the Radio Regulations	BR	The BR should review and report on this subject to the CPM and the Conference	
3 to consider such consequential changes and amendments to the Radio Regulations as may be necessitated by the decisions of the Conference;			
4 in accordance with Resolution **95 (WRC-97)** (GTPLEN1-1), to review the Resolutions and Recommendations of the previous Conferences with a view to their possible revision, replacement or abrogation;			
Resolution **95 (WRC-97)** (GTPLEN1-1) General review of the resolutions and recommendations of world administrative radio conferences and world radiocommunication conferences	BR	to conduct a general review of the resolutions and recommendations of previous conferences and, if necessary after consultation with the Radiocommunication Advisory Group and the Chairmen of the relevant radiocommunication study groups, to submit a report to future competent world radiocommunication conferences which indicates their current status, and what follow-up action may be advised.	RAG
5 to review, and take appropriate action on, the report from the Radiocommunication Assembly submitted in accordance with Nos. 135 and 136 of the Convention (Geneva, 1992);			
6 to identify those items requiring urgent actions by the Radiocommunication Study Groups in preparation for the 2001 World Radiocommunication Conference (WRC-01);			
7 in accordance with Article 7 of the Convention (Geneva, 1992):			
7.1 to consider and approve the report of the Director of the Radiocommunication Bureau on the activities of the Radiocommunication Sector since the last Conference;			
7.2 to recommend to the Council items for inclusion in the agenda for the WRC-01, and to give its views on the preliminary agenda for the 2003 Conference and on possible agenda items for future conferences,			
further resolves 8 to recommend to the Council to provide extra budgetary and conference resources so that the following items can be included in this agenda for WRC-99:			
8.1 to consider the regulatory and technical provisions for the quasi-geostationary satellite networks;	WP 4A	to continue studies in accordance with Questions ITU-R 240/4 and 241/4, 209/9;	SG 7, WP 4-9S JWP 10-11S

8.2 to examine the spectrum requirements for telemetry, tracking, and control of fixed-satellite service networks operating with service links in the frequency bands above 17 GHz;	WP 4A	to study the spectrum requirements for telemetry, tracking and control of FSS networks operating with service links in the bands above 17 GHz;	
8.3 to review the use of the frequency band 415 - 526.5 kHz by the aeronautical radionavigation and maritime-mobile services;	WP 8B	to study the use of the band 415 - 526.5 kHz by the ARNS and MMS including Question ITU-R 53-3/8;	
8.4 to review the use of the HF bands by the aeronautical mobile (R) and maritime-mobile services with a view toward meeting the changing needs of these services;	WP 8B	to study this topic;	
8.5 to consider possible extension of the allocation to the mobile-satellite service (Earth-to-space) on a secondary basis in the 14.0 - 14.5 GHz band to cover aeronautical applications as stipulated in Resolution **216 (WRC-97)** (COM5-2);	WP 8D	to study the feasibility of sharing of the band 14.0 - 14.5 GHz between FSS (Earth-to-space), RNS, FS and mobile, except aeronautical mobile;	SGs 4, 7 and 9
8.6 to consider the provision of up to 3 MHz of frequency spectrum for the implementation of telecommand links in the space research and space operation services in the frequency range between 100 MHz and 1 GHz, taking into account Resolution **723 (WRC-97**) (COM5-1);	WP 7D	to continue studies in accordance with Question ITU-R 219/7;	SGs 8, 9, 10 and 11
8.7 to consider provision of up to 6 MHz of frequency spectrum to the earth exploration-satellite service (active) in the frequency band 420 - 470 MHz in accordance with Resolution **727 (WRC-97)** (COM5-13);	WP 7D	to continue studies in accordance with Question ITU-R 218/7;	SG 8
8.8 to consider changes to the allocations in Region 3 for the band 1350 - 1 400 MHz to permit co-primary use by the fixed service;	WP 9D	to study the feasibility of sharing between the radiolocation and fixed services in the band 1350 - 1 400 MHz.	SG 8

ATTACHMENT 1 TO ANNEX 7

ANNEX 2 TO RESOLUTION 130 (WRC-97) (COM5-18)

ITU-R studies on frequency sharing between non-GSO FSS and GSO FSS

The following is a list of the studies and related activities required.

1) Characterization of short-duration interference peaks which might exceed epfd limits set by a WRC for large earth station antennas, in terms of maximum and mean amplitudes, maximum and mean durations, mean time between occurrences, aggregate percentages of time of occurrences and typical amplitude/time profiles.

2) Acquisition of data relating to the impact of the interference peaks on the performance of a range of earth station demodulators of various types and origins. Administrations are encouraged to cooperate in this matter by arranging for the appropriate measurements to be carried out, and submitting the results to the appropriate working parties or task groups in time to be included in the CPM Report to the next conference.

3) Carrying out computer simulations to determine the impact on epfd statistics of multiple non-GSO networks interfering with a GSO downlink, and in particular to discover the percentage-of-time thresholds for which the probability of simultaneous interference peaks from satellites in different non-GSO constellations becomes significant. Both homogeneous and inhomogeneous sets of non-GSO systems should be simulated where the necessary data are available.

4) Conducting investigations to find out whether the emissions from the satellites and earth stations of non-GSO systems would cause problems for the TT&C of GSO (and non-GSO) satellites, during both their launch and operational phases, and the development of methods for avoiding such problems.

5) Carrying out computer simulations to derive the time statistics of short-term interference between two or more non-GSO FSS networks, with the objective of determining the approximate number of such networks which could co-exist in the same bands.

6) Identification and validation of software which could be used by BR to check whether a system for which an application for spectrum has been made would comply with the epfd and apfd limits.

7) Carrying out studies to determine the feasibility of frequency sharing between non-GSO FSS networks using circular orbits and networks using slightly-inclined geostationary orbits, and also between non-GSO FSS networks and networks using "quasi-geostationary" orbits.

8) Development, if practicable, of continuous curves of epfd versus antenna diameter and/or G/T of the GSO earth station to be protected. Whilst it may be necessary to limit the compliance checking by BR to a few discrete antenna sizes, administrations will need to know that the protection will be adequate in the cases of antennas of other sizes; hence the desirability of continuous curves.

9) Continuation of studies on techniques for the mitigation of interference between GSO and non-GSO networks, and between non-GSO and non-GSO networks.

10) Refinement of the methodologies in new Recommendation ITU-R [Document BL/14] for the derivation of I/N limits and their conversion to epfd and apfd limits, taking into account propagation fade statistics, the different circumstances of "transparent" and remodulating satellite transponders, and the impact of fade counter-measures such as adaptive power control.

11) Consideration of how account can be taken, in studies concerning the definition of uplink limits, of the gain versus off-axis angle characteristics of the receiving spot beams of geostationary satellites.

12) Taking into account that the bands allocated to the FSS are used by the fixed, radiolocation and space science services, study of the criteria for sharing between non-GSO FSS and GSO FSS systems and systems in those services.

ATTACHMENT 2 TO ANNEX 7

ANNEX 1 TO RESOLUTION 532 (WRC-97) (PLEN-3)

Principles for the review and possible revision of the 1997 BSS Plans for Regions 1 and 3

The 1997 World Radiocommunication Conference, reviewed the planning principles proposed by several administrations and those adopted by WRC-95 in Resolution **531**, and agreed to establish an inter-conference representative group (IRG) to carry out studies in accordance with the principles given below.

These principles are to be used in assessing the possibilities for meeting the objectives in this Resolution.

1) Provide, for all countries, a minimum capacity equivalent to around ten analogue channels while maintaining the same proportionality adopted by WARC-77.

2) Planning is to be based mainly on national coverage.

3) Protect notified assignments which are in conformity with Appendices 30 and 30A, which have been brought into use and for which the date of bringing into use has been confirmed to the Bureau.

4) In order to avoid obsolescence of the plans, caused by technical assumptions becoming out of date, ensure that the Plan is established with a view to achieving long-term flexibility.

5) Leaving capacity for future additional requirements.

6) Consider, for planning, whether a complete digital approach may be appropriate in the future and, if so, provide for the simultaneous operation of analogue and digital systems, if necessary during a defined time-scale.

7) Ensure that the integrity of the Region 2 Plans and their associated provisions is preserved, by providing the same protection to the assignments contained in those Plans as now received under the relevant provisions of the Radio Regulations, and by not requiring more protection from assignments in the Region 2 Plans than that currently provided under the Radio Regulations.

8) Ensure compatibility between the broadcasting-satellite service in Regions 1 and 3 and services having allocations in the planned bands in all three Regions.

ANNEX 2 TO RESOLUTION 532 (WRC-97) (PLEN-3)

Inter-conference representative group

WRC-97 has resolved that an inter-conference representative group (IRG) be established to study the feasibility of increasing the minimum capacity for countries in Regions 1 and 3 to around the equivalent of ten analogue channels in accordance with the principles set out in Annex 1.

The IRG should be structured to consist of:

- a supervisory policy group open to participation by all Member States, but endeavouring to ensure adequate representation of administrations from all ITU regions;
- the Bureau, assisted by a group of technical experts (GTE) and working under the guidance of the supervisory policy group. Members of the GTE should be drawn from all Member States and Sector Members on the basis of technical expertise.

JWP 10-11S is encouraged to contribute to the studies requested of ITU-R, as appropriate.

Requests for additional studies by the IRG

1) Annex 7 of Appendix 30

The IRG is requested to examine Annex 7 in the light of its studies for possible revision of the BSS Plans and with respect to the decisions taken by WRC-97, such as the reduction of downlink e.i.r.p. Its advice on the relevance of that Annex in providing protection to all services sharing the plan bands, and particularly the Region 2 BSS Plans, should be reported to WRC-99.

2) Avoidance of monopolization of the BSS resource

The IRG is requested to consider concerns identified by WRC-97: modifications of the Plans for additional requirements or subregional systems should not lead to monopolization of the use of the bands by a country or a group of countries. Advice on how to address these concerns should be reported to WRC-99.

Requests for studies by ITU-R

ITU-R is requested to study and provide advice to the IRG on the following subjects.

1) Appropriate technical criteria for the studies addressing the following:

- digital-to-digital protection ratios;
- digital-to-analogue protection ratios;
- analogue-to-digital protection ratios;
- digital emission masks;

and associated calculation methods.

2) A possible reduction in e.i.r.p. and related C/N ratio and link budget margins, as a means of alleviating BSS/terrestrial compatibility constraints.

3) Appropriate feeder-link e.i.r.p. and receiver noise temperature.

4) Comparison of alternative polarization options.

5) The suitability of the minimum earth receive elevation angles used by WARC-77.

Request to ITU

ITU is requested to provide the necessary assistance to facilitate the active participation of developing countries, especially the LDCs, in both the supervisory policy group and the technical group of experts of the IRG.

ANNEX 8

DRAFT CPM-01 REPORT OUTLINE

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ANNEX 9

Allocations of ITU-R preparatory work for the 2001

Topic	Responsible and Concerned Study Group[5]	Action to be taken by the ITU-R Study Group	Action taken
resolves to give the view that the following items should be included in the preliminary agenda of WRC-01, to be held in late 2001: 1 to take appropriate action in respect of those urgent issues that were specifically requested by the 1999 World Radiocommunication Conference (WRC-99);			
2 on the basis of proposals from administrations and the Report of the Conference Preparatory Meeting, and taking account of the results of WRC-99, to consider and take appropriate action in respect of the following topics:			
2.1 requests from administrations to delete their country footnotes or to have their country's name deleted from footnotes, if no longer required, in accordance with Resolution **26 (Rev.WRC-97)**;			
Resolution **26 (Rev.WRC-97)** Footnotes to the table of frequency allocations in article S5 of the Radio Regulations		No action	
2.2 consideration of Article **S25** concerning the amateur and amateur-satellite services;			
Article **S25**	SG 8	to carry out studies in accordance with Question ITU-R 43-3/8	
2.3 issues related to Appendix **S3**			
2.3.1 to consider the results of studies regarding the boundary between spurious and out-of-band emissions;	SG 1	to complete studies in accordance with Question ITU-R 211/1	
2.3.2 to consider the inclusion of general limits for out-of-band emissions in the Radio Regulations, in particular with regard to whether it is appropriate to do so, taking into account the results of ITU-R studies;	SG 1		
2.4 review of the frequency and channel arrangements in the MF and HF bands allocated on a primary basis to the maritime-mobile service, taking into account the use of new digital technology, in accordance with Resolution **347 (WRC-97)** (COM4-10);			
Resolution **347 (WRC-97)** (COM4-10) Use of digital telecommunication technologies in the MF and HF bands by the maritime mobile service	SG 8	to initiate studies in response to this Resolution	

[5] All appropriate regulatory/procedural studies on relevant agenda items will be carried out by the Special Committee on Regulatory/Procedural matters (SC) on the basis of proposals from the membership of the ITU and the relevant ITU-R Working Party/Task Group/Joint Rapporteur Group.

2.5 to review in Appendix **S2/7** the Table of Transmitter Frequency Tolerances, taking into account the frequency tolerance limits specified in Recommendation ITU-R SM.1045;			
Recommendation ITU-R SM.1045	SG 1	to continue studies in accordance with Question ITU-R 54/1	
2.6 to consider the status of allocations to the radiolocation service in the bands around 3.0 GHz and around 5.5 GHz;			
	SGs 4, 7, 8 and 9	to continue studies in accordance with Question ITU-R 216/8	
2.7 sharing between the FSS and FS in the 19 GHz band, when used bidirectionally by the FSS to provide feeder links for non-geostationary satellite systems in the mobile-satellite service;			
	SGs 1, 4, 7, 8, 9	to continue studies in accordance with Question ITU-R 212/1	
2.8 to consider spectrum requirements for wideband aeronautical telemetry in the band between 3 and 30 GHz;			
	All SGs	SG 8 should consider spectrum requirements and all SGs study sharing possibilities	
2.9 review of allocations to the space-research service (deep space) (space-to-Earth) and the inter-satellite service in the frequency range 32 - 32.3 GHz with a view to improving the sharing conditions between these services;			
	SGs 3, 4, 7 and 9	to study sharing conditions between these services in the band 32 - 32.3 GHz	
2.10 to consider Appendix **S13** and Resolution **331 (Rev.WRC-97)** with a view to their deletion and, if appropriate, consider related changes to Chapter SVII and other provisions of the Radio Regulations as necessary, taking into account the continued transition to the Global Maritime Distress and Safety System (GMDSS);			
Resolution **331 (Rev.WRC-97)**	SG 8	to review the operational and procedural incompatibilities between the old and new systems	
2.11 to consider the results of studies, and take necessary actions relating to: 2.11.1 the exhaustion of the maritime mobile service identity numbering resource (Resolution **344 (WRC-97)** (COM4-5)); 2.11.2 shore-to-ship distress communication priorities (Resolution **348 (WRC-97)** (COM4-11));			
Resolution **344 (WRC-97)** (COM4-5) Exhaustion of the maritime mobile service identity numbering resource	SG 8	1 to keep under review the Recommendations for assigning Maritime Mobile Service Identities, with a view to identifying alternative resources before the resources are exhausted; 2 to consult each other (ITU-R and ITU-T) when addressing changes to any of the Recommendations affecting the MMSI numbering resources; 3 to complete studies on an urgent basis when a future WRC identifies the impending exhaustion of the MMSI resource,	

Resolution **348 (WRC-97)** (COM4-11) Studies required to provide priority to distress communications originated by shore-based search and rescue authorities	SG 8	1 ITU-R to monitor the status of these studies and to develop suitable Recommendations;	
2.12 consideration of the need to realign the allocations to the amateur, amateur-satellite and broadcasting services around 7 MHz on a worldwide basis, taking into account Recommendation **718 (WARC-92)**;			
Recommendation **718 (WARC-92)** Alignment of allocations in the 7 MHz band allocated to the amateur service	SGs 8, 9 and 10	to study sharing conditions around 7 MHz	
2.13 examination of the adequacy of the frequency allocations for HF broadcasting from about 4 MHz to 10 MHz, taking into account the seasonal planning procedures adopted by WRC-97, and to consider bringing forward the date of availability of the HF bands allocated by WARC-92 to the broadcasting service in response to Resolution **29 (WRC-97)** (COM4-16) Information on the occupancy by fixed and mobile services in the additional HF bands allocated by WARC-92 to the broadcasting service and Resolution **537 (WRC-97)** (COM4-14) Survey of HFBC transmitter and receiver statistics as called for in Resolution **517 (Rev.WRC-97)**;			
Resolution **517 (Rev.WRC-97)** Transition from double-sideband (DSB) to single-sideband (SSB) or other spectrum-efficient modulation techniques in the HF bands between 5 900 kHz and 26 100 kHz allocated to the broadcasting service	SGs 10, 3	to continue its studies on digital techniques in HF broadcasting as a matter of urgency with a view to the development of this technology for future use in HF broadcasting,	
3 to consider the results of the studies related to the following with a view to considering them for inclusion in the agendas of future conferences:			
3.1 Resolution **528 (WARC-92)**;	SGs 3, 8, 9 and 10	to conduct the necessary studies	
3.2 possible allocations in the frequency bands above 275 GHz;	all Study Groups	to conduct the necessary studies	
3.3 potential for sharing around 4 300 MHz between radio altimeters and space-based passive earth sensors;	SGs 3, 7 and 8	to study potential for sharing around 4 300 MHz between radio altimeters and space-based passive earth sensors	
3.4 additional allocations on a worldwide basis for the non-GSO/MSS with service links operating below 1 GHz in accordance with Resolution **728 (WRC-97)** (COM5-14) "Studies relating to consideration of allocations in the broadcasting band 470 - 862 MHz to the non-geostationary mobile-satellite services";	SGs 3, 8, 10 and 11	1 to invite ITU-R to carry out studies to determine operational and technical means that may facilitate co-frequency sharing between narrow-band non-GSO MSS (space-to-Earth) transmissions and the services to which the band 470 - 862 MHz is allocated, including the bands where the broadcasting service is also allocated; 2 to invite a future competent conference to consider, on the basis of the results of the studies referred to in *resolves* 1, the possibility of making additional allocations on a worldwide basis for non-GSO MSS, taking into account, in particular, *considering* h) and i) above,	

3.5 allocations on a worldwide basis for feeder links in bands around 1.4 GHz to the non-geostationary mobile-satellite services with service links operating below 1 GHz, taking into account the results of ITU-R studies conducted in response to Resolution **127 (WRC-97)** (COM5-15) "Studies relating to consideration of allocations in bands around 1.4 GHz for feeder links of the non-geostationary mobile-satellite services with service links operating below 1 GHz";	SG 3, 7, 8 and 9	1 to invite ITU-R, as a matter of urgency, to carry out studies to determine the operational and technical measures required to facilitate sharing in portions of the band 1 390 - 1 400 MHz between existing and currently planned services and feeder links (Earth-to-space) for non-GSO MSS systems with service links operating below 1 GHz; 2 to invite ITU-R, as a matter of urgency, to carry out studies to determine operational and technical means to facilitate sharing, in portions of the band 1 427 - 1 432 MHz, between existing and currently planned services and feeder links (space-to-Earth) for non-GSO MSS systems with service links operating below 1 GHz; 3 to invite ITU-R, as a matter of urgency, to study operational and technical measures required to protect passive services in the band 1 400 - 1 427 MHz from unwanted emissions from feeder links near 1.4 GHz for non-GSO MSS systems with service links operating below 1 GHz; 4 to invite WRC-99/a future competent conference to consider, on the basis of completion of studies referred to in *resolves* 1, 2 and 3, additional allocations for feeder links on a worldwide basis for non-GSO MSS systems with service links below 1 GHz,	
3.6 use of frequency adaptive systems in the MF/HF bands in accordance with Resolution **729 (WRC-97)** (COM4-7);	SGs 1 and 9	to pursue its studies on the subject (see for example, Questions ITU-R 204-1/1, 147/9, 205/9 or 214/9) with a view to achieve optimum operational performance and compatibility; 2 to report on the results of these studies to a future WRC,	
3.7 allocation of the frequency band 14.5 - 14.8 GHz to the fixed-satellite service (Earth-to-space) in Region 3 (expansion of FSS to include other than feeder links of the BSS);	SGs 4, 7, 9, 10 and 11	to study feasibility of sharing	

ANNEX 10

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